GE RX3i PacSystem Series Service Manual

IC695CRU320

1. Description

The GE Fanuc / Emerson Automation IC695CRU320 is a PACSystem RX3i Redundancy Processor. This module occupies Two (2) slots, Celeron M with processor speed of 1GHz. This processor has a switchover time of Maximum 1 logic scan, minimum 3.133 msec. It supports Up to 64 MB of battery-backed RAM and 64 MB of non-volatile flash user memory. has Two (2) serial communication ports supporting RS232 and RS485 communication standards.

2. Specifications

Specification	Value
Brand	**GE Fanuc / Emerson Automation**
Series	**RX3i PacSystem**
Part	**Number IC695CRU320**
Product	**Type CPU module**
Compatibility	**PACSystems RX3i**
RAM	**64 Megabytes**
NVRAM	**64 Megabytes**
Serial	**Ports 2**
Microprocessor	**Celeron M**
Clock	**Speed 1.0 Gigahertz**
Switchover	**time Maximum 1 logic scan, minimum 3.133 msec.**
Communication	**standards RS232; RS485**
Maximum	**Block Size 128 kilobytes**
Batteries	**IC695ACC302 Lithium Smart Battery IC693ACC302 Series 90-30 Auxiliary Battery Module**
Power	**Requirements 1 AmpÂ at 3.3 Volts DC, 1.2 Amps at 5 Volts DC**
Max	**Program Blocks 512**
Operating	**Temperature 0 to 60 degrees Celsius**
The	**IC695CRU320 is a Redundancy Processor from the PACSystems RX3i product family. This processor is manufactured by GE Fanuc / Emerson automation that is categorized as Programmable Automation Controllers (PAC).**

3. Product Information

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Technical specifications for IC695CRU320

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Series RX3i PacSystem

Part Number IC695CRU320

Product Type CPU module

Compatibility PACSystems RX3i

RAM 64 Megabytes

NVRAM 64 Megabytes

Serial Ports 2

Microprocessor Celeron M

Clock Speed 1.0 Gigahertz

Switchover time Maximum 1 logic scan, minimum 3.133 msec.

Communication standards RS232; RS485

Maximum Block Size 128 kilobytes

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Max Program Blocks 512

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The IC695CRU320 is especially used in redundant or hot-standby configuration. With this controller configuration, availability is significantly increased. Two (2) controller racks with similar configuration functions as Primary (active) and Secondary (stand-by) rack. When a single rack has failed, primarily due to errors detected by the IC695CRU320 or error of the IC695CRU320 processor itself, active controller duty is automatically transferred to the secondary (stand-by). The secondary rack becomes the primary and the failed rack shift to secondary rack. Additionally, manual switchover is possible.

Controller switchover is performed in Maximum of 1 logic scan with minimum switchover time of 3.133 msec. It supports up to IC695RMX128/228 synchronization links and capable of transferring up to 2Mbytes of data. With the Celeron M processor with 1GHz processing speed and 64MB user memory, this controller is ideally used in large and complex applications with increased level of criticality. Additionally, up to 512 program blocks may be saved to this processor which each block size may reach up to 128 KB.

The IC695CRU320 processor is installed to an RX3i backplane, directly to the Peripheral Component Interconnect (PCI) slot. Other module connections to the bus are also through the PCI 2.2 version or higher. This PCI slot enables rapid transfer and sharing of data within the backplane. The IC695CRU320 also supports Series 90-30 I/O modules for phased migration.

The current requirements for the GE Fanuc IC695CRU320 CPU are 1 Amp at 3.3 Volts DC and 1.2 Amps at 5 Volts DC. Two integrated serial ports are available on the module and they support RS-232 and RS-485 communication, respectively. A maximum of 512 program blocks that are configurable wherein up to 128 KB in size per block are supported. The rated flash memory endurance rating is 100,000 write/erase cycles at a minimum. The switchover time is 3.133 milliseconds at a minimum and 1 logic scan at maximum. The maximum amount of data that can be in transfer at a time is up to 2 MB. The IC695CRU320 CPU supports up to two IC695RMX128/228 synchronization links for redundancy. The programming of the IC695CRU320 CPU can be done in the ladder, C, and function block diagram languages. Ethernet communication is supported through the rack-based Ethernet communication module.